

AERO Design Ltd.
2013 - 39th Ave. NE
Calgary, AB, T2E 6R7

AUTHORIZED RELEASE CERTIFICATE

TRANSPORT CANADA
TCCA 24-0078
AMF # 73-04

Product: Cargo Mirror Installation Part #: 64901-01

Approval #: SH06-3 Serial #: --

WO #: 2007-06 Quantity: 1

Eligibility: Robinson R44 Work Status: Manufactured

Remarks: Including Mirror (64920-01), Outer Spacer (64921-01), Inner Spacer (64921-02)

I hereby certify that the product identified above has been manufactured in accordance with the applicable design data and the Canadian Aviation Regulations or applicable foreign regulations.

March 19/07
Date

Jeff Clarke
Inspector's Signature

WORK ORDER 2007-06

Date opened: 19 March, 2007

Project: Cargo Mirror Installation
Type: Robinson R22/44Batch Quantity: 6 Outer Spacer (64921-01)
6 Inner Spacer (64921-02)
3 Outer Inner Spacer (64921-03)
3 Inner Spacer (64921-04)Approval: SH06-3
Drawing List: DCL649

Fabrication and Assembly Drawing(s)	Description
64901, Rev. 0	R44 Installation
64902, Rev. 0	R22 Installation
64921, Rev. 0	Parts Fabrication

Complete material tracking information on attached pages.

Work Order pre-completion Inspection:

Project is on Approval Limitation Record:	<u>Y ✓</u>
Document Control List revision level matches (or exceeds) STC:	<u>Y ✓</u>
Drawings revision levels match Document Control List:	<u>Y ✓</u>
Purchase order or Work order source is recorded for each part/ass'y:	<u>Y ✓</u>
Tests and inspections specifically called out on drawings are complete:	<u>Y ✓</u>
Release tags associated with all fabricated parts are attached:	<u>Y</u>
All mounting hardware and supplies are included:	<u>Y ✓</u>

List all non-conformities raised: _____

Inspector Signature: _____

Date: _____

Drawing: 64901 Revision 0
Assembly: 64901-01 R44 Cargo Mirror Installation

Qty Per	Part #	Description	Material	P.O./W.O.	Checked
6 Total	64901-01	Installation			
1	64920-01	Mirror Assembly	Mirror	7023	
1	64921-01	Outer Spacer	Below		
1	64921-02	Inner Spacer	Below		
1	AN5-6A	Bolt		6029	

Processes	Per	Mat'ls Used	Inspection	Signature
-----------	-----	-------------	------------	-----------

Tag incomplete parts with Work Order # when stored between processes.

Tag complete parts / assemblies with Release Tag prior to storage.

Drawing: 64902 Revision 0
Assembly: 64902-01 R22 Cargo Mirror Installation

Qty Per	Part #	Description	Material	P.O./W.O.	Checked
3 Total	64902-01	Installaiton			
1	64920-01	Mirror Assembly	Mirror		
1	64921-03	Outer Spacer	Below		
1	64921-04	Inner Spacer	Below		
1	AN5-6A	Bolt		6029	

Processes	Per	Mat'ls Used	Inspection	Signature
-----------	-----	-------------	------------	-----------

Tag incomplete parts with Work Order # when stored between processes.

Tag complete parts / assemblies with Release Tag prior to storage.

Drawing: 64920 Revision 0
Assembly: --

Qty Per	Part #	Description	Material	P.O./W.O.	Checked
6	64921-01	Outer Spacer	3/4" Dia Rod, 6061-T6 Aluminum	3005	
6	64921-02	Inner Spacer	3/4" Dia Rod, 6061-T6 Aluminum	3005	
3	64921-03	Outer Spacer	3/4" Dia Rod, 6061-T6 Aluminum	3005	
3	64921-04	Inner Spacer	3/4" Dia Rod, 6061-T6 Aluminum	3005	

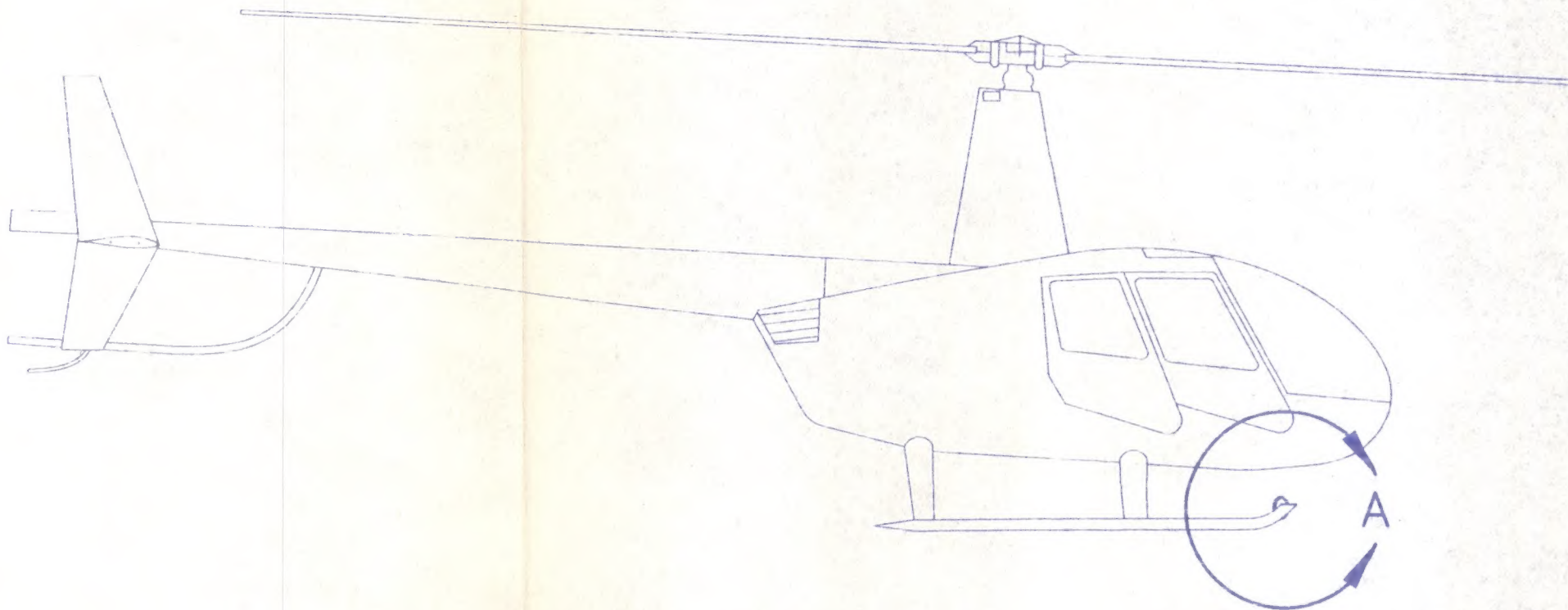
Processes	Per	Mat'ls Used	Inspection	Signature
Final Inspection	Drawing 64921			<i>Jeff Clark</i>

Tag incomplete parts with Work Order # when stored between processes.

Tag complete parts / assemblies with Release Tag prior to storage.

THIS DRAWING CONTAINS INFORMATION AND DATA WHICH IS PROPRIETARY TO AERO DESIGN LTD. THIS DRAWING, OR ANY PORTION THEREOF, MAY NOT BE REPRODUCED, COPIED, OR DUPLICATED IN ANY MANNER, NOR USED FOR MANUFACTURING WITHOUT THE WRITTEN CONSENT OF AERO DESIGN LTD. BY ACCEPTING THIS DRAWING FOR REFERENCE, THE RECIPIENT AGREES TO HOLD AERO DESIGN LTD. HARMLESS FROM THE USE, OR MISUSE, OF THIS DRAWING OR THE INFORMATION CONTAINED THEREON.

REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE		



01 R44 INSTALLATION

SCALE 1 : 40

DRILL P (0.323)

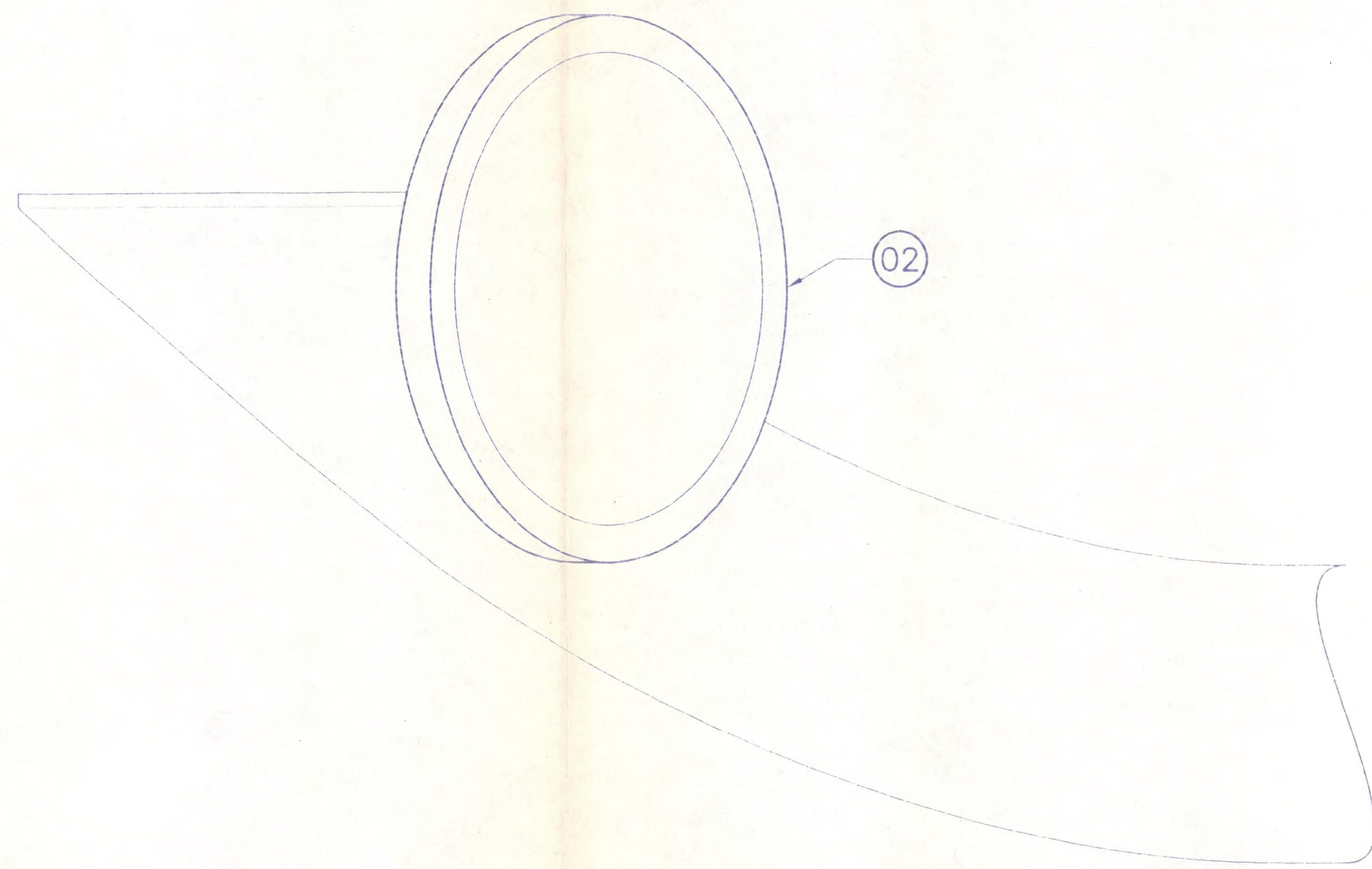
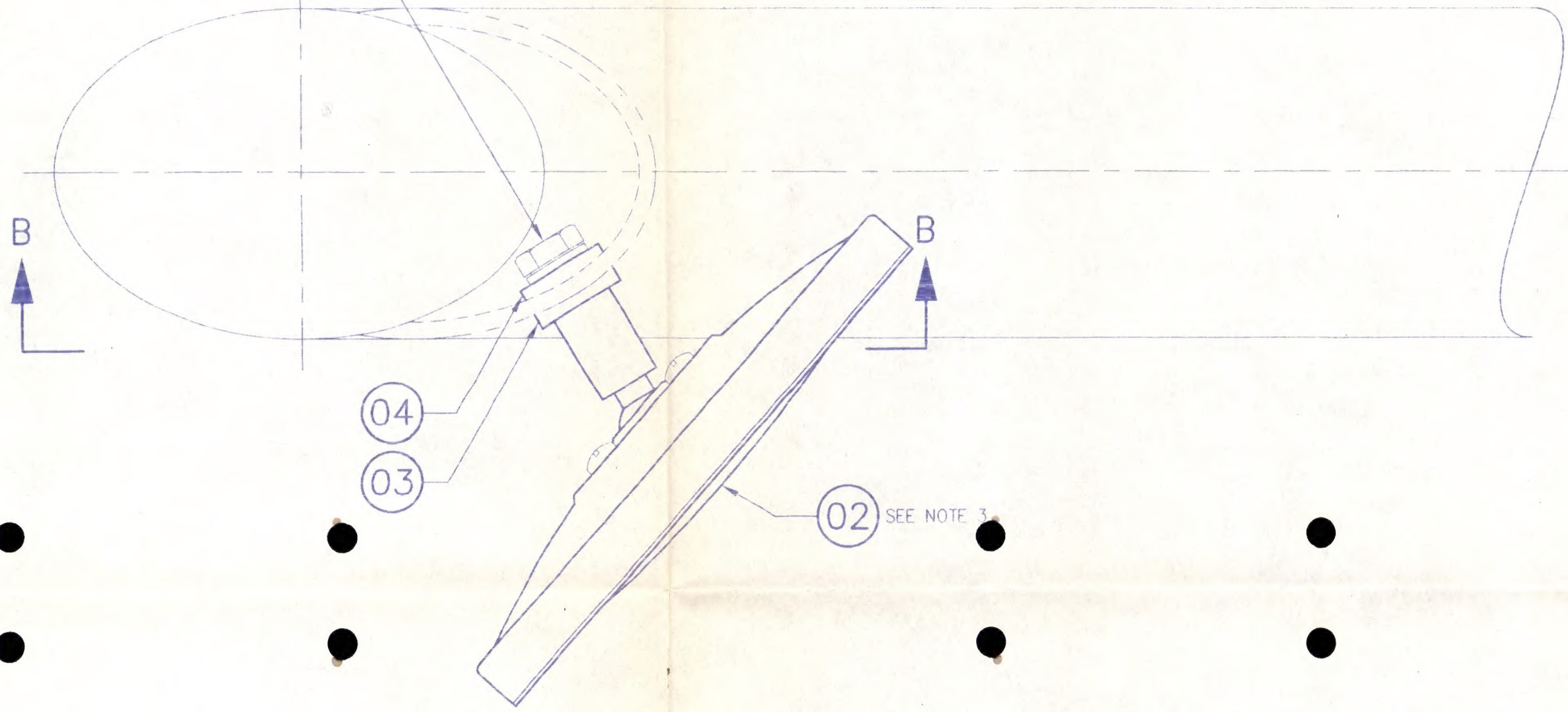
0.25 REF
SEE NOTE 2

0.75

SECTION B-B

MIRROR ASSEMBLY NOT SHOWN

AN5-6A BOLT
AN960-516 WASHER



DETAIL A

LOOKING OUTBOARD AT RIGHT SKID TUBE

NOTES:

1. REMOVE ALL BURRS AND SHARP EDGES.
2. ADJUST MIRROR POSITION AS REQUIRED TO SUIT PILOT. HOLE MAY BE MAXIMUM 0.75 INCH FORWARD OF THE POSITION SHOWN TO THE AFT CENTRELINE OF THE SKID TUBE.
3. ROTATE MIRROR AS REQUIRED FOR BEST PILOT VIEW.

INSTALLATION INSTRUCTIONS:

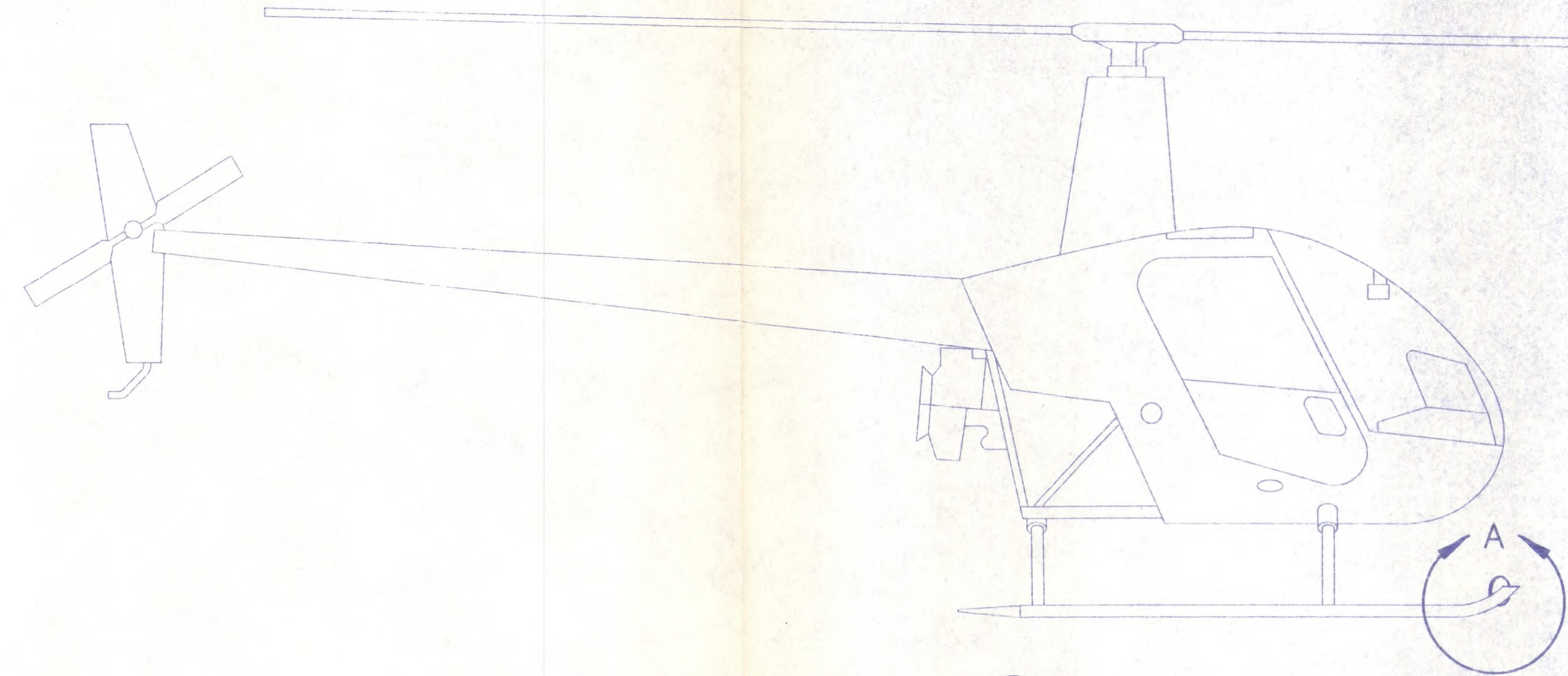
1. REMOVE END CAP FROM FORWARD TIP OF SKID TUBE. CAP IS HELD IN PLACE WITH SEALANT (PRC OR EQUIVALENT).
2. REMOVE ALL TRACES OF SEALANT FROM TIP OF SKID TUBE AND END CAP.
3. DETERMINE HOLE LOCATION. CENTRE DRILL HOLE. UNI-BIT SUGGESTED TO MAKE HOLE, OR DRILL $\phi 3/16$, THEN $\phi 1/4$, THEN $\phi 5/16$.
4. DE-BURR HOLE.
5. INSERT AN5-6A BOLT WITH AN960-516 WASHER AND INNER SPACER (64921-02) IN HOLE FROM INSIDE SKID TUBE.
6. PUT OUTER SPACER (64921-01) ON BOLT. ENSURE SPACERS ARE ALIGNED WITH SKID TUBE.
7. APPLY LOCTITE 262 (OR EQUIVALENT) TO BOLT.
8. THREAD MIRROR ASSEMBLY (64920-01) ONTO BOLT.
9. TORQUE AN5-6A BOLT TO 100-140 IN-LBS.
10. INSTALL END CAP ON FORWARD TIP OF SKID TUBE USING PR1422B2 SEALANT OR EQUIVALENT.

A/R	AN960-516	WASHER			
1	AN5-6A	BOLT			
1	64921-02	04	INNER SPACER		
1	64921-01	03	OUTER SPACER		
1	64920-01	02	MIRROR ASSEMBLY		
1	64901-01	01	INSTALLATION		
01	PART NO.	ITEM	DESCRIPTION	MATERIAL	MATERIAL SPEC
QTY					STOCK SIZE

LIST OF MATERIALS

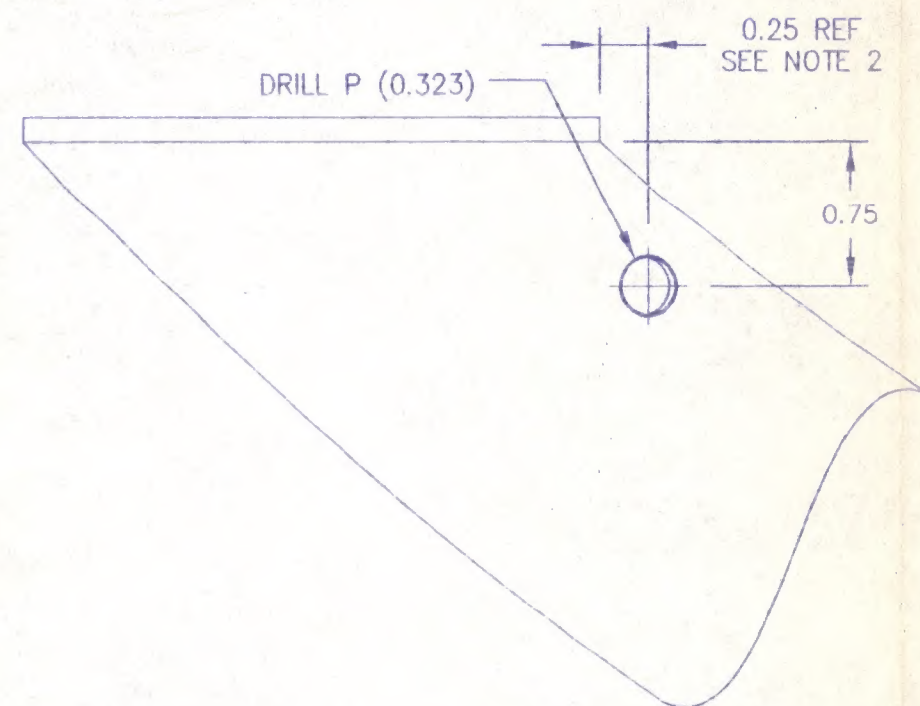
WEIGHT AND BALANCE							APPROVALS		DATE	AERO DESIGN LTD.						
ITEM	DESCRIPTION	WEIGHT (LB)	LONGITUDINAL		LATERAL		DRAWN:	JEFF CLARKE	15 APR 2005	CONSULTING ENGINEERS, TRANSPORT CANADA APPROVALS, DAR 290M 2013 - 39TH AVENUE N.E., CALGARY, ALBERTA, CANADA, T2E 6R7 tel: (403) 250-8027 fax: (403) 250-8333 aerodesign@telusplanet.net						
			ARM (IN)	MOMENT (LB-IN)	ARM (IN)	MOMENT (LB-IN)										
01	MIRROR INSTALLATION	0.5	35	17.5	39	19.5	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON: DECIMALS ANGLES X.XXX ±0.010 ±1/2" X.XX ±0.03 X.X ±0.1			ROBINSON R44 MIRROR INSTALLATION INSTALLATION						
						SCALE 1 : 1				DWG. SIZE	DWG. NO.		REV.			
						SHEET 1 OF 1				A1		64901		0		

THIS DRAWING CONTAINS INFORMATION AND DATA WHICH IS PROPRIETARY TO AERO DESIGN LTD. THIS DRAWING, OR ANY PORTION THEREOF, MAY NOT BE REPRODUCED, COPIED, OR DUPLICATED IN ANY MANNER, NOR USED FOR MANUFACTURING WITHOUT THE WRITTEN CONSENT OF AERO DESIGN LTD. BY ACCEPTING THIS DRAWING FOR REFERENCE, THE RECIPIENT AGREES TO HOLD AERO DESIGN LTD. HARMLESS FROM THE USE, OR MISUSE, OF THIS DRAWING OR THE INFORMATION CONTAINED THEREON.			
REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE		



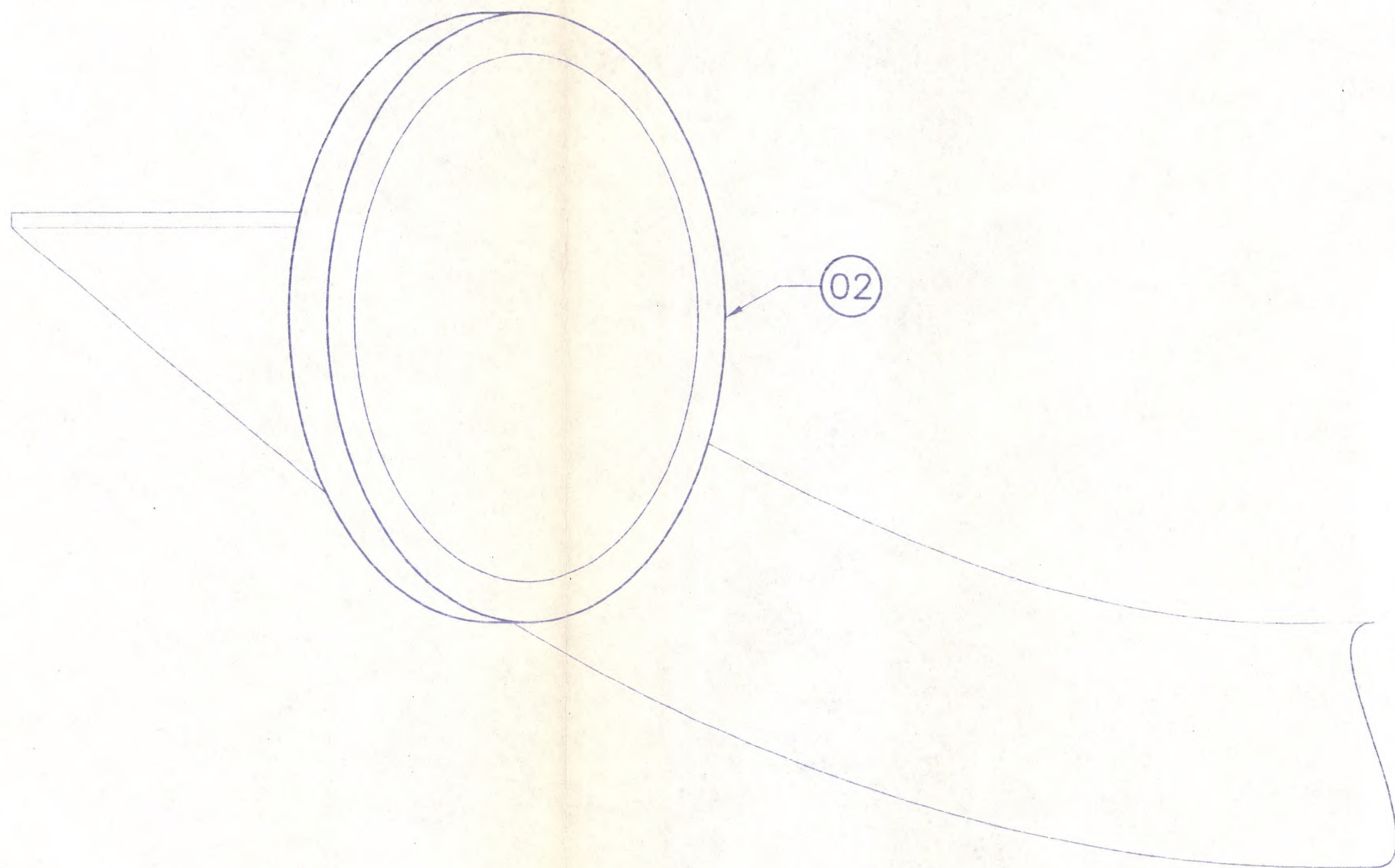
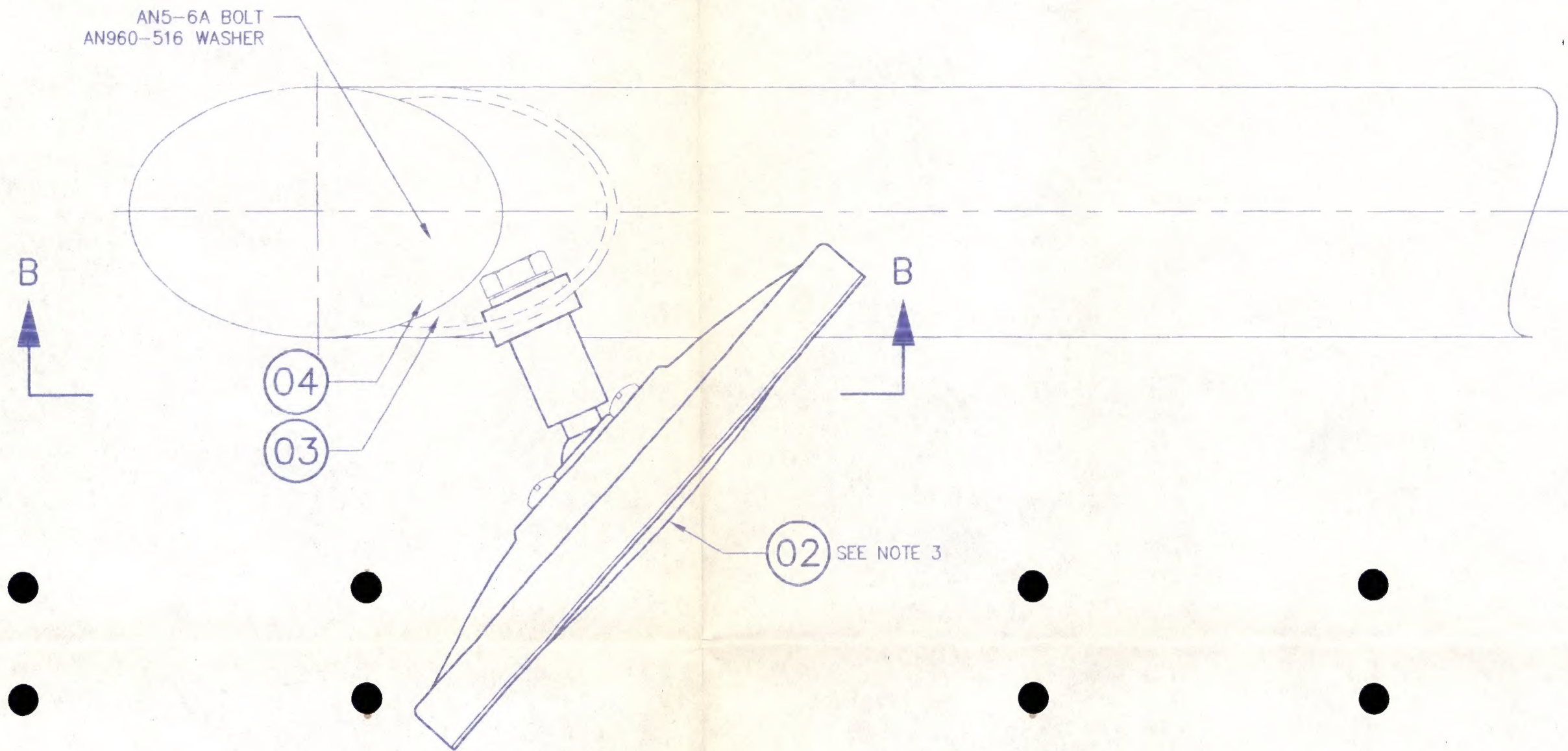
01 INSTALLATION

SCALE 1 : 20



SECTION B-B

MIRROR ASSEMBLY NOT SHOWN



DETAIL A

LOOKING OUTBOARD AT RIGHT SKID TUBE

NOTES:

1. REMOVE ALL BURRS AND SHARP EDGES.
2. ADJUST MIRROR POSITION AS REQUIRED TO SUIT PILOT. HOLE MAY BE MAXIMUM 0.75 INCH FORWARD OF THE POSITION SHOWN TO THE AFT CENTRELINE OF THE SKID TUBE.
3. ROTATE MIRROR AS REQUIRED FOR BEST PILOT VIEW.

INSTALLATION INSTRUCTIONS:

1. REMOVE END CAP FROM FORWARD TIP OF SKID TUBE. CAP IS HELD IN PLACE WITH SEALANT (PRC OR EQUIVALENT).
2. REMOVE ALL TRACES OF SEALANT FROM TIP OF SKID TUBE AND END CAP.
3. DETERMINE HOLE LOCATION. CENTRE DRILL HOLE. UNI-BIT SUGGESTED TO MAKE HOLE, OR DRILL $\phi 3/16$, THEN $\phi 1/4$, THEN P (0.323).
4. DE-BURR HOLE.
5. INSERT AN5-6A BOLT WITH AN960-516 WASHER AND INNER SPACER (64921-04) IN HOLE FROM INSIDE SKID TUBE.
6. PUT OUTER SPACER (64921-03) ON BOLT. ENSURE SPACERS ARE ALIGNED WITH SKID TUBE.
7. APPLY LOCTITE 262 (OR EQUIVALENT) TO BOLT.
8. THREAD MIRROR ASSEMBLY (64920-01) ONTO BOLT.
9. TORQUE AN5-6A BOLT TO 100-140 IN-LBS.
10. INSTALL END CAP ON FORWARD TIP OF SKID TUBE USING PR1422B2 SEALANT OR EQUIVALENT.

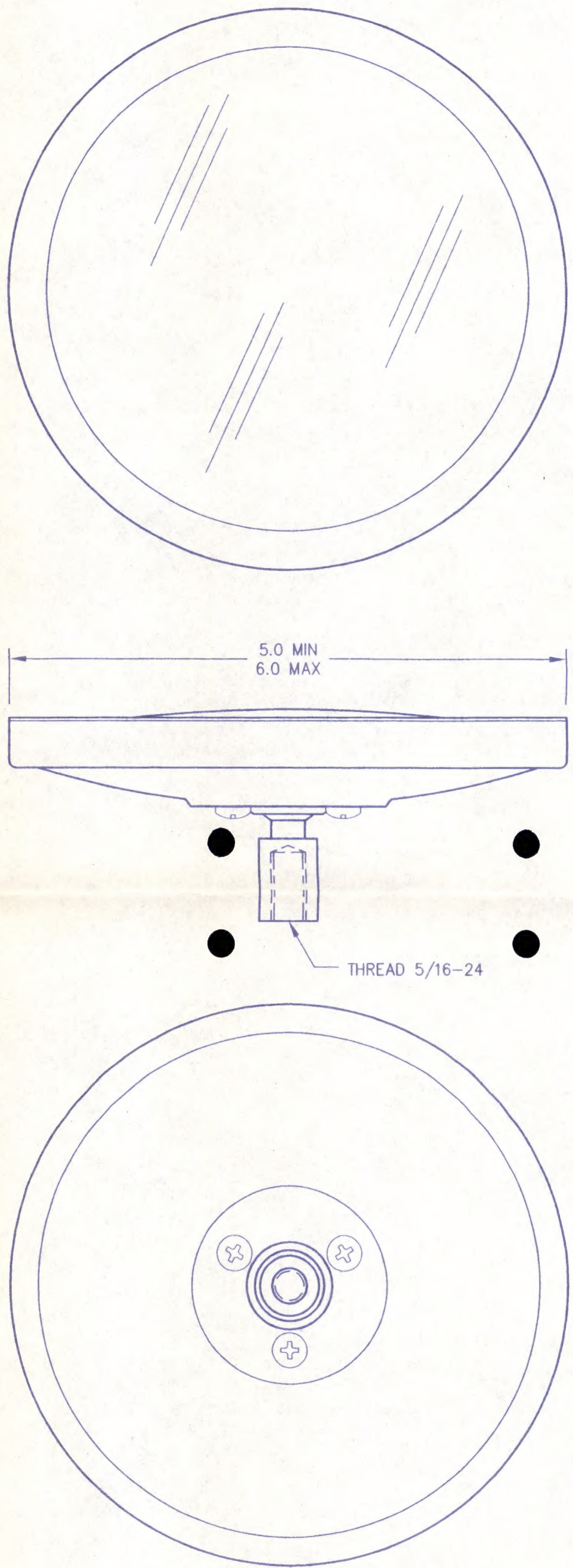
A/R	AN960-516	WASHER			
1	AN5-6A	BOLT			
1	64921-04	04 INNER SPACER			
1	64921-03	03 OUTER SPACER			
1	64920-01	02 MIRROR ASSEMBLY			
	64902-01	01 INSTALLATION			
01	PART NO.	ITEM	DESCRIPTION	MATERIAL	MATERIAL SPEC
QTY					STOCK SIZE

LIST OF MATERIALS

WEIGHT AND BALANCE							APPROVALS		DATE	AERO DESIGN LTD.						
ITEM	DESCRIPTION	WEIGHT (LB)	LONGITUDINAL		LATERAL		DRAWN:	15 APR 2005			CONSULTING ENGINEERS, TRANSPORT CANADA APPROVALS, DAR 290M 2013 - 39TH AVENUE N.E., CALGARY, ALBERTA, CANADA, T2E 6R7 tel: (403) 250-8027 fax: (403) 250-8333 aerodesign@telusplanet.net					
			ARM (IN)	MOMENT (LB-IN)	ARM (IN)	MOMENT (LB-IN)	CHECKED:	E. BURGAIN								
01	MIRROR INSTALLATION	0.5	35.6	17.8	36	18	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON: DECIMALS ANGLES X.XXX ±0.010 ±1/2° X.XX ±0.03 X.X ±0.1				ROBINSON R22 MIRROR INSTALLATION INSTALLATION					
											SCALE 1 : 1				DWG. SIZE	DWG. NO.
							SHEET 1 OF 1				A1		64902		0	

THIS DRAWING CONTAINS INFORMATION AND DATA WHICH IS PROPRIETARY TO AERO DESIGN LTD. THIS DRAWING, OR ANY PORTION THEREOF, MAY NOT BE REPRODUCED, COPIED, OR DUPLICATED IN ANY MANNER, NOR USED FOR MANUFACTURING WITHOUT THE WRITTEN CONSENT OF AERO DESIGN LTD. BY ACCEPTING THIS DRAWING FOR REFERENCE, THE RECIPIENT AGREES TO HOLD AERO DESIGN LTD. HARMLESS FROM THE USE, OR MISUSE, OF THIS DRAWING OR THE INFORMATION CONTAINED THEREON.

REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE		



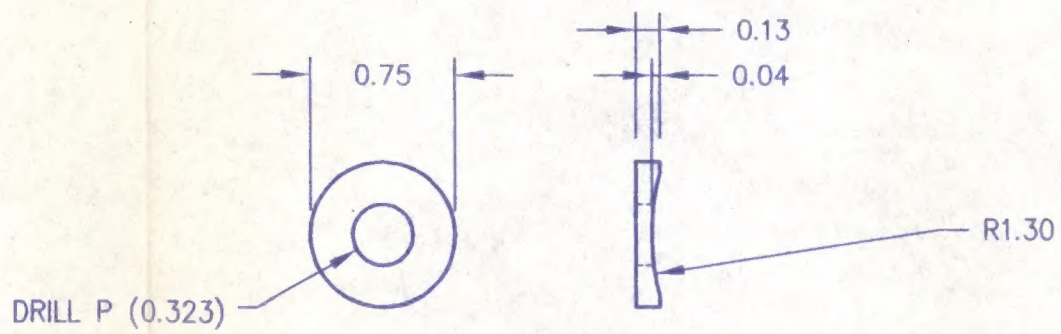
NOTES:

1. THE INTENT OF THIS DRAWING IS TO PROVIDE A LIST OF ACCEPTABLE MIRRORS, AND TO PROVIDE GENERAL DIMENSIONS FOR THE ACQUISITION OF REPLACEMENT MIRRORS THAT MAY NOT BE LISTED. ANY OTHER COMMERCIAL MIRROR THAT MEETS THE SPECIFICATIONS SHOWN MAY BE USED.
2. MIRROR MOUNTING LUG MUST BE 5/16-24 THREADED.
3. ACCEPTABLE MIRRORS:
SIGNAL-STAT 7315 (5" DIAMETER)
SIGNAL-STAT 7318 (6" DIAMETER)
TRUCK-LITE 97618, 97619, 97620 (5" DIAMETER)
TRUCK-LITE 97621, 97622, 97623 (6" DIAMETER)

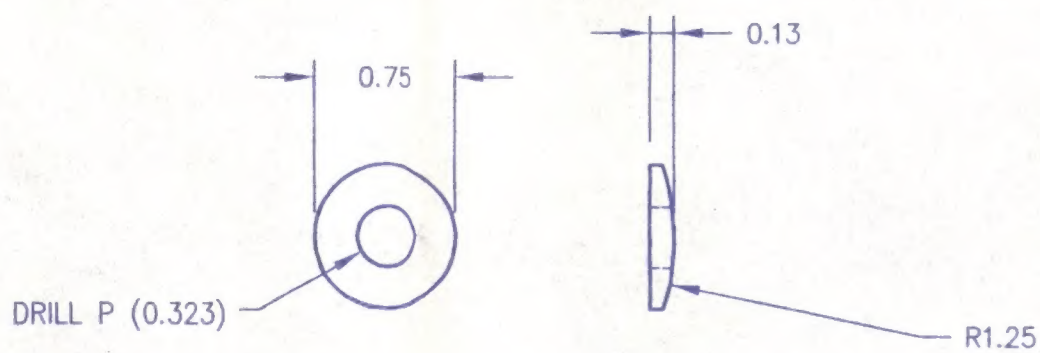
64920-01	01	MIRROR ASSEMBLY			
01	PART NO.	ITEM	DESCRIPTION	MATERIAL	MATERIAL SPEC
QTY					
LIST OF MATERIALS					
APPROVALS			DATE		
DRAWN: JEFF CLARKE			13 APR 2005		
CHECKED: E. BURGOIN					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON:			ROBINSON R22, R44 MIRROR INSTALLATION MIRROR ASSEMBLY		
DECIMALS			ANGLES		
X.XXX ±0.010			±1/2°		
X.XX ±0.03					
X.X ±0.1					
SCALE 1 : 1			DWG. SIZE	DWG. NO.	REV.
SHEET 1 OF 1			A1	64920	0

THIS DRAWING CONTAINS INFORMATION AND DATA WHICH IS PROPRIETARY TO AERO DESIGN LTD. THIS DRAWING, OR ANY PORTION THEREOF, MAY NOT BE REPRODUCED, COPIED, OR DUPLICATED IN ANY MANNER, NOR USED FOR MANUFACTURING WITHOUT THE WRITTEN CONSENT OF AERO DESIGN LTD. BY ACCEPTING THIS DRAWING FOR REFERENCE, THE RECIPIENT AGREES TO HOLD AERO DESIGN LTD. HARMLESS FROM THE USE, OR MISUSE, OF THIS DRAWING OR THE INFORMATION CONTAINED THEREON.

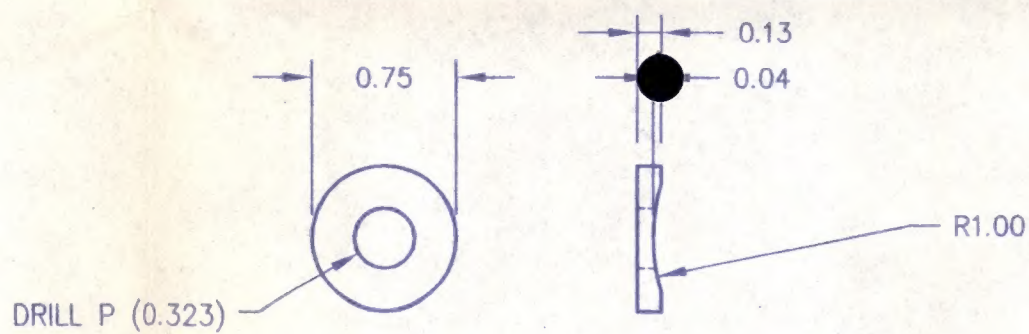
REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE		



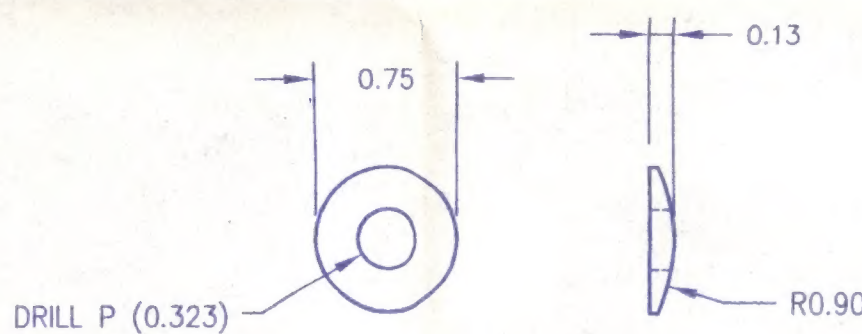
01 OUTER SPACER



02 INNER SPACER



03 OUTER SPACER



04 INNER SPACER

- NOTES:
1. REMOVE ALL BURRS AND SHARP EDGES.
 2. ALL ALUMINUM PARTS TO BE THOROUGHLY DECREASED, ALODINED AND PAINTED.

	64921-04	04	OUTER SPACER	6061-T6 ALUMINUM	QQ-A-200/8	0.75 DIA RND. BAR
	64921-03	03	INNER SPACER	6061-T6 ALUMINUM	QQ-A-200/8	0.75 DIA RND. BAR
	64921-02	02	OUTER SPACER	6061-T6 ALUMINUM	QQ-A-200/8	0.75 DIA RND. BAR
	64921-01	01	INNER SPACER	6061-T6 ALUMINUM	QQ-A-200/8	0.75 DIA RND. BAR
01	PART NO.	ITEM	DESCRIPTION	MATERIAL	MATERIAL SPEC	STOCK SIZE
QTY	LIST OF MATERIALS					

AERO DESIGN LTD.
CONSULTING ENGINEERS, TRANSPORT CANADA APPROVALS, DAR 290M
2013 - 39TH AVENUE N.E., CALGARY, ALBERTA, CANADA, T2E 6R7
tel: (403) 250-8027 fax: (403) 250-8333 aerodesign@telusplanet.net

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES.
TOLERANCES ON:
DECIMALS: X.XXX ±0.010
X.XX ±0.03
X.X ±0.1
ANGLES: ±1/2°

SCALE 1 : 1	DWG. SIZE	DWG. NO.	REV.
SHEET 1 OF 1	A1	64921	0